Chapter 4.4.9: General Ecology and Wildlife Resources

4.4.9-1 INTRODUCTION

This chapter provides information on habitat communities, wildlife, endangered and threatened species, and invasive species in the vicinity of the Project site and considers the potential long-term impacts of the Project on ecological resources. Chapter 4.5 identifies the potential impacts of the Project during construction.

4.4.9-2 METHODOLOGY

For consideration of ecology and wildlife resources, the "Project area" is defined as an approximately 200-foot area extending south of the proposed new railroad alignment and roughly 1,500 linear feet west and east from the center point of the existing Portageville Bridge. It also encompasses the areas to the north and south of the railroad alignment on the west side of the Genesee River where the existing Park Road would be shifted and where the existing parking area would be relocated. In total, the Project area is approximately 19 acres and comprises the area of disturbance for the Project.

Existing conditions within the Project area were described from habitat observations made during field visits conducted on August 20, 2008, July 21, 2009 (in conjunction with a Letchworth State Park naturalist), May 17, 2012, and June 4, 2012 and from information identified in the published and unpublished sources (see "References" at the end of this chapter).

The laws and regulations listed below apply to the protection of natural resources associated with the Project. They include those directly related to habitats and protection of species, as well as those intended to protect water quality, which in turn protects habitats:

- ***Clean Water Act (33 USC 1251-1387):*** The federal Clean Water Act (CWA), also known as the federal Water Pollution Control Act, is intended to restore and maintain the chemical, physical, and biological integrity of U.S. waters. It regulates point sources of water pollution (i.e., discharges of municipal sewage, industrial wastewater, stormwater; and the discharge of dredged or fill material into navigable waters and other waters of the U.S.) and non-point source pollution (i.e., runoff from streets, agricultural fields, construction sites and mining that enter waterbodies, from other than the end of a pipe).
- ***Endangered Species Act of 1973 (16 USC 1531-1544):*** The federal Endangered Species Act of 1973 recognizes that endangered species of wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value. The Act prohibits the importation, exportation, taking, possession, and other activities involving illegally taken species covered under the Act, and interstate or foreign commercial activities. The Act also provides for the protection of critical habitats on which endangered or threatened species depend for survival. This Act requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) for any actions that may jeopardize threatened or endangered species, or destroy or adversely modify their critical habitats.
- ***Bald and Golden Eagle Protection Act (16 USC 668-668c):*** The Bald and Golden Eagle Protection Act prohibits anyone without a permit issued by the Secretary of the Interior, acting through the USFWS, from taking bald or golden eagles, including their parts, nests, or

eggs. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

- ***Executive Order 13112 "Invasive Species:"*** Executive Order 13112 requires federal agencies to prevent, to the extent practicable and permitted by law, the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.
- ***Fish and Wildlife Conservation Act (16 USC 661-667d):*** The federal Fish and Wildlife Coordination Act entrusts the Secretary of the Interior with providing assistance to, and cooperation with, federal, state, and public or private agencies and organizations to ensure that wildlife conservation receives equal consideration and coordination with other water-resource development programs. These programs can include the control (such as a diversion), modification (such as channel deepening), or impoundment (dam) of a body of water.
- ***State Pollutant Discharge Elimination System (SPDES) (ECL Article 3, Title 3; Article 15; Article 17, Titles 3, 5, 7, and 8; Article 21; Article 70, Title 1; Article 71, Title 19; Implementing Regulations 6 NYCRR Part 750):*** Under Section 402 of the federal Clean Water Act, stormwater discharges to the waters of the U.S. require authorization by a National Pollutant Discharge Elimination System (NPDES) permit or pursuant to an authorized state permit program. New York State has established the State Pollutant Discharge Elimination System (SPDES) program for controlling wastewater and stormwater discharges to groundwaters and surface waters; the SPDES program is an authorized program under the CWA. New York State has established the SPDES program for controlling wastewater and stormwater discharges to groundwaters and surface waters.
- ***Protection of Waters (Article 15, Title 5, ECL, Implementing Regulations 6 NYCRR Part 608):*** The New York State Department of Environmental Conservation (NYSDEC) is responsible for administering Protection of Waters regulations to prevent undesirable activities on surface waters (streams, lakes, and ponds) of the State of New York.
- ***Endangered and Threatened Species of Fish and Wildlife; Species of Special Concern (ECL, Sections 11-0535[1]-[2], 11-0536[2], [4], Implementing Regulations 6 NYCRR Part 182):*** These New York State regulations prohibit the taking, import, transport, possession or selling of any endangered or threatened species of fish or wildlife, or any hide, or other part of these species as listed in 6 NYCRR § 182.6.

4.4.9-3 EXISTING CONDITIONS

4.4.9-3-1 Habitat

Letchworth State Park consists of more than 14,000 acres on both sides of the Genesee River from the Mount Morris Dam on the north to the Village of Portageville on the south. The park includes a deep gorge carved by the Genesee River that is as high as 550 feet in some locations. Along the river within the park there are three major waterfalls and dozens of smaller ones.

The park has a variety of ecological communities including a number of upland forests, such as Appalachian oak-hickory, hemlock-northern hardwoods, maple-basswood rich mesic forests, and successional northern hardwood forests, among others. A variety of wetlands and seeps are also present throughout the park. This diversity of habitats supports a number of plant and animal species, including species at risk, as described in more detail in the following sections.

The Project area includes a number of ecological communities, which are described below. It also contains a number of human-made features. On the west side of the bridge, there are two

paths, a park road, parking lot, cleared right-of-way, train tracks, and portions of the bridge structure. Upland forest and a small wetland border these features. On the east side, there is a trail that follows the edge of the river. This trail leads to the bridge footings within the river on the east side, a cleared right-of-way, and a road at the easternmost portion of the Project area. Within the gorge, the bridge rests on concrete foundations within the river and within the gorge walls. These human-made features cross the natural ecological communities within the Project area.

Based on field observations, correspondence from the New York State Natural Heritage Program (NYNHP),[1] and data provided by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP), eight ecological communities as described by the Ecological Communities of New York State (Edinger et al. 2002) occur within the Project area and surrounding area. Two of these communities, as noted below and shown on **Figure 4.4.9-1**, are considered significant from a statewide perspective. **Appendix B** provides descriptions of these communities within the state and within Letchworth State Park. **Table B-1 in Appendix B** provides a list of plant species observed during field visits. Descriptions of each community, as per Edinger et al. (2002), are provided below.[2]

- Within the Project site, the ***shale cliff and talus community*** occupies approximately 1.5 acres and is located on both the east and west sides of the Genesee River. According to a 2011 geological investigation undertaken by Golder Associates Inc., the Project area consists of fine-grained silty sandstones with interbedded shale layers of the Nunda Formation. Nunda soils are formed in a silty mantle with underlying till that is strongly influenced by calcareous clayey shale and siltstone. Some areas have very stony or extremely stony surfaces. Within the Project area, this community has been disturbed during previous bridge construction episodes.

  Within the park, this community occurs on the cliffs and slopes surrounding the existing Portageville Bridge and forms the walls (totaling approximately 427 acres throughout the park) of the approximately 22-mile-long Letchworth canyon gorge of the Genesee River. The cliff is as high as 550 to 600 feet in some locations. According to a letter from NYNHP dated December 31, 2013, this community is considered significant from a statewide perspective and has high ecological and conservation value. This is the largest example of shale cliff and talus community in the state.[3] More information on the shale cliff and talus community within the park is provided in **Appendix B**.

  Throughout the park, this community typically exists on nearly vertical exposures of shale, siltstone, and sandstone bedrock and includes ledges and small areas of talus. Talus areas are composed of small fragments that are unstable and steeply sloping; the unstable nature of the shale results in uneven slopes and many rock crevices. The block size of the talus is strongly influenced by the type of rock forming the cliff face and the rate of erosion; for example, shale or rapidly eroding sandstone forms unstable, small, loose talus. There is minimal soil development, and vegetation is usually sparse. Different types of shale cliffs may be distinguished based on exposure and moisture.

  OPRHP data indicate that throughout the park, approximately 72 percent of this community consists of rock/shale and 5 percent is sand, both of which are unvegetated. In other areas, vegetation includes tall shrubs found shading or growing from the base or the top of the cliff,

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1 Letters from NYNHP dated August 27, 2008; January 26, 2010; March 20, 2012, and December 31, 2013. See **Appendix B**.

2 NYNHP online ecological community information, http://www.acris.nynhp.org.

3 NYSOPRHP data (2012).

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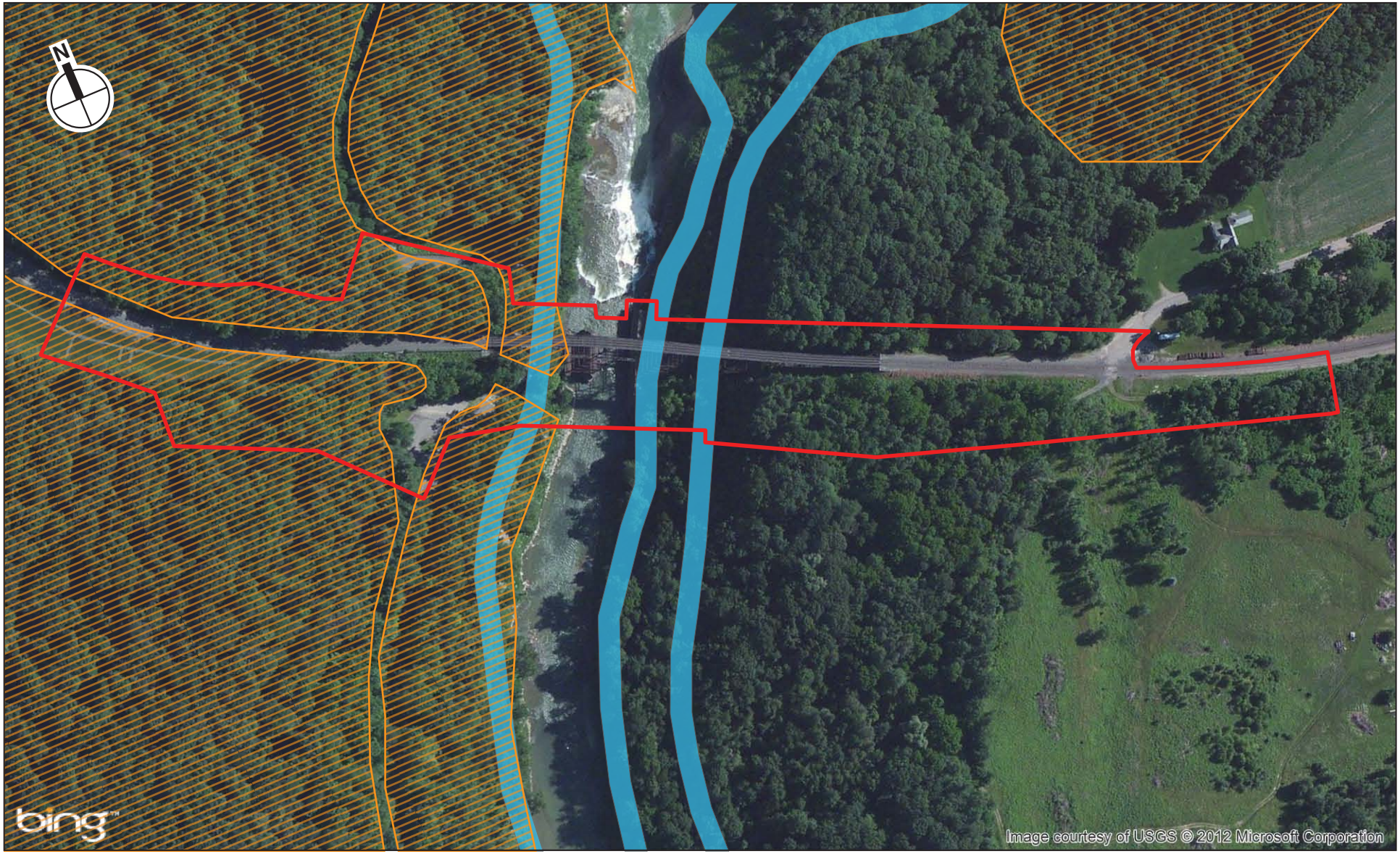

Project Site Boundary

Hemlock-Northern Hardwood Forest Ecological Community

Shale Cliff and Talus Ecological Community

0 200 500 FEET

SCALE

Notes:
The shale cliff and talus community is situated vertically within the Project area. Thus, the lines shown on this figure represent the locations of this community, not the spatial area.

PORTAGEVILLE BRIDGE

New York Natural Heritage Program Rare Ecological Communities
Figure 4.4.9-1

including basswood (*Tilia americana*) and white ash (*Fraxinus americana*). Short shrubs include quaking aspen (*Populus tremuloides*), serviceberry (*Amelanchier canadensis*), box elder (*Acer negundo*), Japanese wineberry (*Rubus phoenicolasius*), and mapleleaf viburnum (*Viburnum acerifolium*). The herb layer is dominated by fescue (*Festuca* sp.), grass of parnassus (*Parnassia glauca*), Ontario lobelia (*Lobelia kalmia*), Canada goldenrod (*Solidago canadensis*), bluejoint grass (*Calamagrostis canadensis*), and St. John's wort (*Hypericum perforatum*). Mosses occupy approximately 8 percent of the lower portions of the shale cliff and liverworts about 3 percent.[4]

- The ***hemlock–northern hardwood forest*** was observed throughout the western (Wyoming County) side of the Genesee River in various states of disturbance and interspersed with open areas, particularly along the existing railroad right-of-way. This community was also observed on the eastern (Livingston County) side of the Genesee River particularly along a west-facing ridge of the Project area with disturbed successional communities (described below) along the existing railroad right-of-way.

  A hemlock–northern hardwood forest is a mixed forest that typically occurs on middle to lower slopes of ravines; on cool, mid-elevation slopes; and on moist, well-drained sites at the margins of swamps. In any one stand, hemlock (*Tsuga canadensis*) is co-dominant with any one to three of the following: beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), white pine (*Pinus strobus*), yellow birch (*Betula alleghaniensis*), black birch (*B. lenta*), red oak (*Quercus rubra*), and basswood. Within this community, the relative cover of hemlock can be quite variable, ranging from nearly pure stands in some steep ravines to as little as 20 percent of the canopy cover.[5]

  Within the Project area, this community is better represented on the western side of the river. However, on both sides of the river, there is variability in the coverage of hemlock. On the eastern side, hemlock is prominent along the steep portions of the ridge, whereas birches, maples, and ash are dominant at the lower elevations and at the top of the ridge. On the western side, near-uniform stands of hemlock were observed in areas in and adjacent to the Project area.

  Within Letchworth State Park, the overall canopy cover within the hemlock-northern hardwood forest averages 71 percent, with an overstory of hemlock, sugar maple, white oak (*Quercus alba)*, and white pine. The subcanopy is hemlock, beech, and sugar maple. Shrub composition consists of hemlock, sugar maple, and hopehornbeam (*Ostrya virginiana),* maple-leaf viburnum, and beech. The herb layer is sparsely vegetated with Pennsylvania sedge (*Carex pensylvanica)*, marginal woodfern (*Dryopteris marginalis)*, and numerous other species including Christmas fern (*Polystichum acrostichoides*), Canada mayflower (*Maianthemum canadense*), white wood aster (*Aster divaricatus*), bluestem goldenrod (*Solidago caesia*), and jack-in-the-pulpit (*Ariseama triphyllum*). Mosses occupy roughly 2 percent of the forest floor (mostly on rocks). Unvegetated surfaces include leaf litter, wood, rock, and exposed soil. [6] As shown in **Appendix B, Table B-1**, many of these species were observed throughout this community within the Project area during site investigations.

  Within Letchworth State Park, there are 81 patches of this community totaling 2,401 acres. This community is centered within the park with good to excellent overall internal integrity and buffered by surrounding natural communities. Patches range from 1 to 196 acres in

[4] NYSOPRHP data (2012).

[5] Edinger et al. (2002).

[6] NYSOPRHP data (2012).

size.[7] This community is considered significant from a statewide perspective and has high ecological and conservation value.[8]

- The ***maple–basswood rich mesic forest*** is a forest dominated by sugar maple (*Acer saccharum*), basswood (*Tilia americana*), and white ash (*Fraxinus americana*). Other common tree species can include ironwood (*Ostrya virginiana*), yellow birch (*Betula alleghaniensis*), red oak (*Quercus rubra*), American beech (*Fagus grandifolia*), bitternut hickory (*Carya cordiformis*), shagbark hickory (*Carya ovata*), tulip tree (*Liriodendron tulipifera*), butternut (*Juglans cinerea*), and American hornbeam (*Carpinus caroliniana*). This community is best identified by an abundance of basswood in association with sugar maple and a high diversity of herbaceous species that occur on rich soil, including spring ephemeral plants. The diverse flora of rich herbs (especially ferns) including maidenhair fern (*Adiantum pedatum*), bulblet fern (*Cystopteris bulbifera*), Goldie's fern (*Dryopteris goldiana*), silvery spleenwort (*Deparia acrostichoides*), glade fern (*Diplazium pycnocarpon*), and plantain-sedge (*Carex plantaginea*) confirm this community.

  In the Letchworth State Park, this community is relatively large with good to high quality patches located on lower rocky sloped and steep west- and north-facing slopes along the Genesee River. Large patches of this community are present to the north and east of the project site. This community is considered significant from a statewide perspective and has high ecological and conservation value.[9]

  Within the Project site, several characteristic species of this community are present (i.e., basswood, sugar maple, yellow birch, and white ash) within the hemlock–northern (described above) and successional northern hardwood forest (described below) communities. Although the Project site contains some of the species of the maple–basswood rich mesic forest, the species assemblages as characterized above are not present. Therefore, the maple–basswood rich mesic forest is not present within the Project site.

- The ***successional northern hardwood forest*** occurs in the eastern portion of the Project area. A successional northern hardwood forest is a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: quaking aspen (*Populus tremuloides*), bigtooth aspen (*P. grandidentata*), balsam poplar (*P. balsamifera*), paper birch (*Betula papyrifera*), or gray birch (*B. populifolia*), pin cherry (*Prunus pensylvanica*), black cherry, red maple, white pine, with lesser amounts of white ash, green ash (*F. pensylvanica*), and American elm (*Ulmus americana*).[10]

  Within the Project area, pockets resembling this community occur only along the eastern side of the Genesee River. These communities represent edge habitat between the open portions of the railroad right-of-way and the hemlock northern–hardwood community as described above. These pockets are dominated by white ash and black walnut (*Juglans nigra*) with dames rocket (*Hesperis matronalis*), upland bent grass (*Agrostis perennans*), garlic mustard (*Alliaria petiolata*), white snakeroot (*Ageratina altissima*), and bedstraw (*Galium* sp.) in the understory. Other common tree species in this area include sugar maple,

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7 NYNHP data (2012).

8 Letters from NYNHP dated August 27, 2008; January 26, 2010; and March 20, 2012, and December 31, 2013. See **Appendix B**.

9 Letters from NYNHP dated August 27, 2008; January 26, 2010; and March 20, 2012, and December 31, 2013. See **Appendix B**.

10 Edinger et al. (2002).

cottonwood (*Populus deltoides*), yellow birch, white pine, and white oak. This community is common throughout this portion of the state.

- The ***railroad*** community is characterized as a permanent road having a line of steel rails fixed to wood ties and laid on a gravel roadbed that provides a track for railroad cars or equipment. There may be sparse vegetation rooted in the gravel substrate. The railroad right-of-way may be maintained by mowing or herbicide spraying.[11] The railroad traverses both sides of the river covering the full (approximately 3,000 feet) length of the Project area. Some areas directly bordering the track appear to be maintained by infrequent mowing and others are used for storage of railroad construction and maintenance materials (east side) and are overgrown with weeds such as mugwort (*Artemisia vulgaris*). These areas range in width from approximately 30 feet to about 150 feet at the widest location (west side).
- The ***confined riverine community*** is represented by relatively large, fast flowing sections of streams with a moderate to gentle gradient. These streams have a well-defined pattern of alternating pools, riffles, and runs. Confined rivers usually have poorly defined meanders (i.e., low sinuosity), occur in confined valleys, and are most typical of the midreaches of stream systems. They are typically of moderate depth, width, and low flow discharge and usually represent a network of 3rd to 4th order stream segments. Waterfalls are typically present. These streams have high water clarity and are well oxygenated. They are typically surrounded by open upland riverside communities including riverside sand/gravel bar, cobble shore or one of the shoreline outcrop communities. Within the Project area, the Genesee River is a confined riverine community.
- The ***palustrine system*** is represented within the Project area by the presence of one perennial wetland (Wetland A, discussed in more detail in Chapter 4.4.1, "Wetlands"). Wetland A, a 0.09-acre palustrine emergent wetland, is located roughly 400 feet upland on the Wyoming County side of the river. This wetland occurs within the proposed railroad right-of-way of the Preferred Alternative.[12]
- The ***intermittent stream*** community is a small, intermittent or ephemeral streambed in the uppermost segments of stream systems where water flows only during the spring or after a heavy rain and often remains longer, ponded in isolated pools. These streams typically have a moderate to steep gradient and hydric soils. Stream B (discussed in more detail in Chapter 4.4.2, "Surface Waterbodies and Watercourses") is an intermittent stream community located near the western boundary of the Project area.

4.4.9-3-2 Fish and Wildlife Resources

Fish

The aquatic habitats within the Project area and surrounding area, including this portion of the Genesee River and Stream B, support a variety of fish species. According to Edinger et al. (2002), fishes typical of confined riverine communities and/or the Genesee River may include creek black redhorse (*Moxostoma duquesnei),* chub (*Semotilus atromaculatus*), pumpkinseed (*Lepomis gibbosus*), common shiner (*Luxilus cornutus*), and trout-perch (*Percopsis omiscomaycus*). Fish species typical of emergent palustrine wetlands and wooded streams (e.g., Stream B) include brook trout (*Salvelinus fontinalis*), slimy sculpin (*Cottus cognatus*), creek chub (*Semotilus atromaculatus*), longnose dace (*Rhinichthys cataractae*), tesselated darter

[11] Edinger et al. (2002).

[12] Wetlands and Waterways Delineation Report, 2010 (provided in **Appendix A** to this DEIS).

(*Etheostoma olmsteadii*), fathead minnow (*Pimephales promelas*), and bluntnose minnow (*Pimephales notatus*).

Wildlife

The diversity of habitat and the variety of land uses within the Project area and surrounding area, supports numerous species of birds, mammals, reptiles, amphibians, and insects. Several of these wildlife species known to, or expected to, occur in the area are state-listed as threatened or endangered, or species of special concern.

- ***Birds:*** Birds that were observed during field visits included: American crow (*Corvus brachyrhynchos*), American goldfinch (*Carduelis tristis*), American robin (*Turdus migratorius*), Baltimore oriole (*Icterus galbula*), black-capped chickadee (*Poecile atricapillus*), black-throated green warbler (*Setophaga virens*), blue jay (*Cyanocitta cristata*), chipping sparrow (*Spizella passerina*), common yellowthroat (*Geothlypis trichas*), downy woodpecker (*Picoides pubescens*), eastern wood peewee (*Contopus virens*), great-blue heron (*Ardea herodias*), great-crested flycatcher (*Myiarchus crinitus*), hairy woodpecker (*Picoides villosus*), indigo bunting (*Passerina cyanea*), pileated woodpecker (*Dryocopus pileatus*), red-eyed vireo (*Vireo olivaceus*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and wild turkey (*Meleagris gallopavo*). The 2000–2005 NYSDEC *Breeding Bird Atlas*, lists 116 breeding bird species documented as confirmed, probable, or possible breeders in the census blocks in which the Project area is located (Blocks 2471A and 2471B; see **Table B-2 in Appendix B**[13]). These two blocks contain a similar complement of species. Of these, forest dwelling species (e.g., ruffed grouse [*Bonasa umbellus*], veery [*Catharus fuscescens*], and blackburnian warbler [*Dendroica fusca*]) would be expected to inhabit the forested communities within the Project area and surrounding area. Bird species expected to occur within aquatic habitats of the Project area and vicinity include waterfowl (e.g., wood duck [*Aix sponsa*], mallard [*Anas platyrhynchos*]), spotted sandpiper (*Actitis macularius*), and riparian-breeding passerines (e.g., Louisiana waterthrush [*Parkesia motacilla*]). It should be noted that seasonal turkey hunting permits are issued by lottery within Letchworth State Park.[14]

  Letchworth State Park has been identified by OPRHP as a Bird Conservation Area (BCA) and by the National Audubon Society as an Important Bird Area. The Letchworth BCA provides habitat for waterfowl, wading birds, and migratory songbirds.[15] It is important for the diverse array of species found, including species at risk.

  In addition to supporting wintering waterfowl populations (e.g., Canada goose), the Letchworth BCA has several great blue heron rookeries, and supports forest, grassland, and shrub/scrub birds, including breeding sharp-shinned hawk, northern goshawk, red-headed woodpecker, bobolink, eastern meadowlark, mourning warbler, golden-winged warbler, and a variety of other Neotropical migratory songbirds.[16]

  OPRHP management guidance for the Letchworth BCA indicates a mission to "…achieve an appropriate balance between conservation of the diverse assemblage of bird species using the area for breeding or during migration, and access to and recreational use of various areas of the BCA."[17] Management guidance for Letchworth includes:

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13 NYSDEC Breeding Bird Atlas (2000-2005) and Herp Atlas Project (1990–1998) database.

14 http://nysparks.state.ny.us/parks/attachments/Letchworth2010TurkeyHuntingApplication.pdf.

15 http://www.dec.ny.gov/animals/32006.html.

16 http://www.dec.ny.gov/animals/32006.html.

17 http://www.dec.ny.gov/animals/62029.html.

- Managing activities in grassland areas to maintain habitat for northern harrier, Henslow's sparrow, and other grassland species (including restricting mowing to after August 15 to allow for breeding activity);
- Designating restricted areas and/or re-routing hiking trails to minimize disturbance to nesting for bald eagle and other rare raptors;
- Mitigating impacts due to sustained browsing activity by white-tailed deer through short-term and long-term management; and
- Identifying educational and research needs to maintain Letchworth as a BCA.

- ***Mammals:*** Mammals observed during field visits include white-tailed deer (*Odocoileus virginianus*), eastern gray squirrel (*Sciurus carolinensis*), red squirrel (*Tamiasciurus hudsonicus*), and eastern chipmunk (*Tamias striatus*). Other mammals with the potential to occur within the Project area include black bear (*Ursus americanus)*, eastern coyote (*Canis latrans*), red fox (*Vulpes vulpes*), white-footed mouse (*Peromyscus leucopus*), brown rat (*Rattus norvegicus*), river otter (*Lutra canadensis*), and raccoon (*Procyon lotor*).[18]
- ***Reptiles and Amphibians:*** The 1990–1999 NYSDEC Herp Atlas Project recorded 30 species of reptiles and amphibians within Wyoming and Livingston counties. The Project area likely supports species common to open freshwater rivers (e.g., northern water snake [*Nerodia sipedon sipedon*)], emergent palustrine wetlands and wooded streams (e.g., spring peeper [*Pseudacris crucifer*)], and terrestrial habitats (e.g., black ratsnake [*Elaphe obsolete*)]. Species observed during site visits include common garter snake (*Thamnophis sirtalis*) and northern two-lined salamander (*Eurycea bislineata*).
- ***Insects:*** The diverse aquatic and terrestrial habitats within and near the Project area are expected to support a variety of insect species. Detailed surveys for insects were not conducted within the Project area. The likely presence of the state-listed special concern gray petaltail dragonfly (*Tachopteryx thoreyi*) and the rare cobblestone tiger beetle (*Cicindela marginipennis)* are discussed with other federally and state-listed species below.

4.4.9-3-3 Endangered, Threatened, Special Concern, and Rare Species and Habitat Communities

Habitat and Plants

According to USFWS records of federally listed species for Wyoming and Livingston Counties, no federally listed plant species occur in the vicinity of the Project site.

NYNHP has confirmed that two ecological communities of statewide significance, the shale cliff and talus community and hemlock–northern hardwood forest community as described above, occur within or in the vicinity of the Project site. As described above, correspondence from the NYNHP (December 31, 2013) included the maple–basswood rich mesic forest community as occurring within a 0.5-mile radius of the Project site, but this community is not located on the Project site. The shale cliff and talus community is located along the banks of the Genesee River on the exposed shale bedrock that forms the walls of the river gorge. The hemlock–northern hardwood forest community is located throughout Letchworth State Park, including the area along the western (Wyoming County) side of the Genesee River in the vicinity of the Project area with a more disturbed community on the east (Livingston County) side of the river within the Project area.

[18] http://nysparks.state.ny.us/publications/documents/biodiverisity/BiodiversityBodySection2.pdf.

Coast creeping moss (*Conardia compacta*), a species that is considered "critically imperiled" in New York State, was reported in 2005 to occur on calcareous mudstone outcrops[19] and calcareous outcrops with gymnostomum moss (*Gymnostomum* sp.)[20] south of the Letchworth State Park's Middle Falls, above the main gorge. This species is typically found on calcareous rock ledges, at entrances to caves, and on underhangs, often where there is little competition from other bryophytes. It is also known to occur on damp cliffs (especially on limestone), or logs, stumps, and humus, and on bark at the base of trees in wooded swamps.[21,22] Within New York State, specimens have been collected from limestone rock,[23] in cedar (*Thuja* sp.) forests, at the base of a large living cedar, and on calcareous outcrops as described above. Specimens collected in other areas of North America are from a vertical calcareous cliff wall, cedar swamp, earth near a creek, a rotten stump, and fens.[24] Coast creeping moss has the potential to occur within the Project area but has not been confirmed as present.

Wildlife

The northern long-eared bat (*Myotis septentrionalis*) has been proposed by the USFWS for listing as endangered and is considered to have the potential to occur within Wyoming and Livingston Counties.[25] The golden-winged warbler (*Vermivora chrysoptera*), which is currently a candidate for listing under the Endangered Species Act, has been documented by Audubon New York as a breeding bird of Letchworth State Park.[26] Additionally, bald eagles (*Haliaeetus leucocephalus*), which are federally protected under the Bald and Golden Eagle Protection Act and listed as threatened in New York State, are known to occur in both counties and have nested in close proximity to the Project area in recent years.[27]

No additional bird, mammal, reptile, amphibian, or insect species were noted by the USFWS or NYNHP as occurring within or within 0.5 miles of the Project area. However, one New York State-threatened reptile and several New York State species of special concern were noted in other source material.[28]

Birds

As noted above, the golden-winged warbler (New York State special concern) and bald eagle (New York State threatened) are known to breed in Letchworth State Park. A known bald eagle nest is located within approximately 1,200 feet (¼ mile) of the Project area. Other potential bald eagle habitat within the Project area and its vicinity includes areas along the Genesee River for foraging, roosting, and potentially breeding. In addition, other New York State species of

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19 NYNHP 2012.

20 New York State Museum Bryophyte Herbarium. Sample collected by Nat Cleavitt, Nancy Slack, Sue Williams (NY Cliff Survey 127). September 2, 2005. Specimen viewed on September 19, 2012.

21 Crum, Howard Alvin and Lewis Edward Anderson. "Mosses of Eastern North America." Columbia University Press. 1981. 1328 pp.

22 Crum H.H. and L. Hedenas. Bryophyte Flora of North America, Provisional Publication. Version 2. Missouri Botanical Garden. April 2010.

23 Personal communication between Anna M. Stalter, Associate Curator and Extension Botanist, L.H. Bailey Hortorium Herbarium (BH) (Cornell University) and Aubrey McMahon, AKRF, Regarding *Conardia compacta* on September 12, 2012.

24 Specimens from New York State Museum Bryophyte Herbarium viewed on September 19, 2012.

25 http://ecos.fws.gov/ipac/wizard/trustResourceList!prepare.action.

26 Wells, J.V. 1998. Important Bird Areas in New York State. National Audubon Society, New York.

27 Roblee, K. 2012. Electronic mail communication between Kenneth Roblee, NYSDEC, and Chad Seewagen, AKRF Inc., April 26, 2012.

28 New York Nature Explorer. 2010. List of species for Livingston and Wyoming Counties, NY. Accessed July 6, 2010 from http://www.dec.ny.gov/natureexplorer/app/.

special concern recorded in the 2000-2005 Breeding Bird Atlas as occurring within or in the vicinity of the Project area include red-shouldered hawk (*Buteo lineatus*), red-headed woodpecker (*Melanerpes erythrocephalus*), golden-winged warbler (*Vermivora chrysoptera*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), northern goshawk (*Accipiter gentilis*), horned lark (*Eremophila alpestris*), cerulean warbler (*Dendroica cerulean*), and vesper sparrow (*Pooecetes gramineus*). Audubon New York notes that six additional state-listed birds nest or have recently nested within Letchworth State Park: northern harrier (*Circus cyaneus,* threatened), upland sandpiper (*Bartramia longicauda,* threatened), Henslow's sparrow (*Ammodramus henslowii*, threatened), grasshopper sparrow (*Ammodramus savannarum,* special concern), and yellow-breasted chat (*Icteria virens,* special concern). These species are described briefly below.

- Bald Eagle

  The bald eagle was delisted from the federal Endangered Species Act in 2007, but bald eagles and their critical habitat remain federally protected under the Bald and Golden Eagle Protection Act. The bald eagle is listed as Threatened in New York State. A known bald eagle nest is located within approximately 1,200 feet (¼ mile) of the Project area within Letchworth State Park. Other potential bald eagle habitat within the Project area and its vicinity includes areas along the Genesee River, for foraging, roosting, and potentially breeding.

  In New York, bald eagles engage in courtship and nest-building between December and March (USFWS 2007). Nests are typically several feet wide and located in tall, living trees near water (NYSDEC 2011). They primarily forage in bays, intertidal marshes, and nonvegetated tidal mudflats that become exposed at low tide and trap fish in drainage channels and pools (Thompson and McGarigal 2002, Thompson et al. 2005). Nonbreeding eagles forage in shoreline areas less often than breeding eagles and instead primarily take fish from open water (Thompson et al. 2005).

- Other Raptors

  Red-shouldered hawk, sharp-shinned hawk, Cooper's hawk, northern goshawk, and northern harrier are birds of prey that are listed by New York State as special concern species and that have been documented within Letchworth State Park. Red-shouldered hawk, sharp-shinned hawk, and Cooper's hawk generally prefer interior forest for breeding (Poole 2005) and are therefore unlikely to nest to the south, east, or west of the Project area where the forest is narrow and edged by agricultural land and roads. Any sharp-shinned hawks, Cooper's hawks, and northern goshawks nesting in Letchworth State Park are more likely to occur north of the Project site, where deeper forest is available. Northern goshawks will use small forest fragments for breeding (Poole 2005), and may therefore have the potential to occur in any direction from the Project site, but occurrence of this species anywhere in the park is quite rare (one known nesting record since the 1990s). Suitable breeding habitat for northern harriers in the vicinity of the Project area is limited to the old field on private land east of the bridge crossing and park boundary.

- Grassland and Shrubland Species

  Vesper sparrow, Henslow's sparrow, grasshopper sparrow, yellow-breasted chat, golden-winged warbler, horned lark, and upland sandpiper are grassland or shrubland bird species that nest or have historically nested within Letchworth State Park. These species are listed by New York State as special concern species. These species generally nest in very low abundance within the park (less than 10 pairs in most cases; Wells 1998). Grassland habitat coverage within the park is extremely minimal (1 percent of the park's total area; Wells 1998) and limited to more northern sections, far from the Project area. As such, vesper

sparrow, Henslow's sparrow, grasshopper sparrow, horned lark, and upland sandpiper would not be expected to occur within or near the Project area. Shrubland habitat is also lacking at the southern end of the park where the Project area is located. Aside from the railroad right-of-way and the river gorge, most of the Project area is forested. However, approximately 700 feet to the east of the existing Portageville Bridge and to the south of the overland railroad right-of-way, the woodland transitions into old field habitat (on privately owned land) with patches of shrubs and young pioneer trees, which may support nesting yellow-breasted chats, and possibly golden-winged warblers, although neither species was observed in this area during a May 17, 2012 field survey.

Yellow-breasted chats are somewhat tolerant of disturbance, as evidenced by their occasional breeding within urban areas (Fowle and Kerlinger 2001). Golden-winged warblers are also known to nest in human-disturbed habitats such as clearcut areas, unused farmland, reclaimed strip mines, and power line corridors (Confer et al. 2011).

- Cerulean Warbler

  Letchworth State Park supports approximately 15 to 20 breeding pairs of cerulean warblers (New York State special concern species) each year (Audubon New York 2012). The habitat requirements of this species are poorly understood, but cerulean warblers are generally thought to need large tracts of unbroken, mature deciduous forest for successful reproduction (Hamel 2000). At the southern end of Letchworth State Park, where the Project area is located, the forest is narrow and edged by agricultural land and roads in three of the four directions. As such, cerulean warblers would not be expected to occur in the vicinity of the Project area, and instead, are more likely to occur to the north, towards more interior forest. No cerulean warblers were observed within or near the Project site during a May 17, 2012 field survey.

- Red-Headed Woodpecker

  Red-headed woodpeckers (New York State special concern) breed in a variety of habitat types, ranging from deciduous forests to farmland to golf courses and parks (Smith et al. 2000). In forested areas, they are commonly found along roadsides or other edges (Smith et al. 2000). As such, red-headed woodpeckers have the potential to breed in the vicinity of the Project site. Audubon New York noted five pairs breeding within Letchworth State Park in 1994 and 1995 (Wells 1998, Audubon New York 2012). No red-headed woodpeckers were observed in or near the Project area during a May 17, 2012 field survey.

Mammals

The eastern small-footed bat (*Myotis leibii*), a New York State species of special concern, occurs in Livingston County. During the winter this species hibernates in caves and mines (hibernacula). The remaining portions of the year it primarily inhabits hemlock–northern hardwood forests containing shale cliff and talus communities. It has been found in buildings, on the face of rock bluffs, in turnpike tunnels, and beneath rock slabs. Offspring are probably born in May or June. Eastern small-footed bats start moving into hibernacula about mid-November (after most other bat species) and leave by March or early April.[29] According to OPRHP, a known hibernaculum used by five different species of bats, including the eastern small-footed bat, has been documented approximately 1 mile from the bridge. Habitat within the Project area and vicinity may support this species, as they may roost or form maternity colonies in rock

[29] Best, T L, and J.B. Jennings. 1997. Mammalian Species No. 547, pp. 1-6. American Society of Mammologists (http://www.science.smith.edu/departments/Biology/VHAYSSEN/msi/pdf/i0076-3519-547-01-0001.pdf)

ledges and talus slopes.[30] However, noise levels and likely vibration effects generated by the daily passage of trains over the existing bridge may prohibit eastern small-footed bats from roosting in the portion of the river gorge within the Project area, depending on the sensitivity of the species to such disturbances during the non-hibernation period.

The northern long-eared bat is listed by the USFWS as occurring in Livingston and Wyoming Counties. Outside of the winter hibernation period, northern long-eared bats generally inhabit mature, closed-canopy, deciduous or mixed forest within heavily forested landscapes.[31,32] The long-eared bat is considered to be an interior-forest-dependent species that requires large tracts of unbroken forest for both foraging and breeding.[33] Unlike many other bats of the region, northern long-eared bats primarily forage in dense forest interior. They do not tend to concentrate along riparian corridors or other linear landscape features as other bat species commonly do, and they typically avoid roads and other forest edges.[34,35,36] Summer roosts of northern long-eared bats are usually in cavities or, less often, under exfoliating bark of large-diameter trees that have high canopy cover,[37,38] but the USFWS considers trees as small as 3 inches in diameter at breast height (DBH) to be potential roost sites.[39] Roosts on buildings and other artificial structures have been documented, but are uncommon.[40] Northern long-eared bats may roost in numerous different tree species, but they use deciduous trees much more so than coniferous trees and show a strong preference for black locust (*Robinia pseudoacacia*) relative to its availability.[41,42] Roost trees are usually in intact forest, close to the core and away from

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30 New York Natural Heritage Program. 2009. Online Conservation Guide for *Myotis leibii*. Available from: ttp://www.acris.nynhp.org/guide.php?id=7406. Accessed July 7, 2010.

31 Owen, S.F., M.A. Menzel, W.M. Ford, B.R. Chapman, K.V. Miller, J.W. Edwards, and P.B. Wood. 2003. Home-range size and habitat used by the northern myotis (*Myotis septentrionalis*). American Midland Naturalist 150:352-359.

32 Ford, W.M., M.A. Menzel, J.L. Rodrigue, J.M. Menzel, and J.B. Johnson. 2005. Relating bat species presence to simple habitat measures in a central Appalachian forest. Biological Conservation 126:528-539.

33 Henderson, L.E., L.J. Farrow, and H.G. Broders. 2008. Intraspecific effects of forest loss on the distribution of the forest-dependent northern long-eared bat (*Myotis septentrionalis*). Biological Conservation 141:1819-1828.

34 Owen, S.F., M.A. Menzel, W.M. Ford, B.R. Chapman, K.V. Miller, J.W. Edwards, and P.B. Wood. 2003. Home-range size and habitat used by the northern myotis (*Myotis septentrionalis*). American Midland Naturalist 150:352-359.

35 Patriquin, K.J. and R.M.R. Barclay. 2003. Foraging by bats in cleared, thinned and unharvested boreal forest. Journal of Applied Ecology 40:646-657.

36 Carter, T.C., and G.A. Feldhamer. 2005. Roost tree use by maternity colonies of Indiana bats and northern long-eared bats in southern Illinois. Forest Ecology and Management 219:259-268.

37 Foster, R.W. and A. Kurta, A. 1999. Roosting ecology of the northern bat (*Myotis septentrionalis*) and comparisons with the endangered Indiana bat (*Myotis sodalis*). Journal of Mammalogy 80:659-672.

38 Menzel, M.A., S.F. Owen, W.M. Ford, J.W. Edwards, P.B. Wood, B.R. Chapman, and K.V. Miller. 2002. Roost tree selection by northern long-eared bat (*Myotis septentrionalis*) maternity colonies in an industrial forest of the central Appalachian mountains. Forest Ecology and Management 155:107-114.

39 United States Fish and Wildlife Service (USFWS). 2014. Northern long-eared bat interim conference and planning guidance. Retrieved from: http://www.fws.gov/midwest/endangered/mammals/nlba/pdf/NLEBinterimGuidance 6Jan2014.pdf (January 14, 2014).

40 Timpone, J.C., J.G. Boyles, K.L. Murray, D.P. Aubrey, and L.W. Robbins. 2010. Overlap in roosting habits of Indiana bats (Myotis sodalis) and Northern bats (Myotis septentrionalis). American Midland Naturalist. 163: 115-123.

41 Menzel, M.A., S.F. Owen, W.M. Ford, J.W. Edwards, P.B. Wood, B.R. Chapman, and K.V. Miller. 2002. Roost tree selection by northern long-eared bat (*Myotis septentrionalis*) maternity colonies in an industrial forest of the central Appalachian mountains. Forest Ecology and Management 155:107-114.

42 Owen, S.F., M.A. Menzel, W.M. Ford, J.W. Edwards, B.R. Chapman, K.V. Miller, and P.B. Wood. 2002. Roost tree selection by maternal colonies of northern long-eared myotis in an intensively managed forest. U.S. Forest Service General Technical Report NE-292.

gaps, clearings, roads, or other edges. Northern long-eared bats will use many different roost trees over the course of the summer, often switching roosts every 1 to 5 days and moving hundreds of meters between successive locations.[43,44]

Letchworth State Park contains large tracts of mature, closed-canopy forest that provide the types of foraging and roosting habitat that are most favored by non-hibernating northern long-eared bats, and northern long-eared bats have historically occurred in the bat hibernaculum approximately 1 mile north of the bridge.[45] Given the range-wide collapse of the species and the spread of White-nose Syndrome (WNS) to Livingston County,[46] however, it is unknown whether this local population is still extent. Any northern long-eared bats potentially remaining in Letchworth State Park would be most likely to occur in the park's interior forest rather than the fragmented and edge-dominated sections of the park, such as the area in which the Project site is located. The Project site lacks interior forest and is intersected by roads, a parking area, the railroad right-of-way, and the wide river gorge. As discussed above, northern long-eared bats typically avoid roads and other forest edges, and do not concentrate along river corridors like aerial-foraging species of bats commonly do. For these reasons, the northern long-eared bat is not considered to be likely to occur near the Project site.

More detailed information on northern long-eared bats and the Project's potential effect on the bats is provided in a Biological Evaluation that was prepared for the Project and submitted to the USFWS. This information and correspondence from the USFWS related to the Biological Evaluation are provided in **Appendix B** of this DEIS.

Reptiles and Amphibians

The New York State threatened timber rattlesnake, the special concern spiny softshell turtle (*Apalone spinifera*), wood turtle (*Glyptemys insculpta*), blue-spotted salamander (*Ambystoma laterale*), and Jefferson salamander (*Ambystoma jeffersonianum*) have been noted in Livingston and Wyoming Counties.

- Timber rattlesnake

  Timber rattlesnakes (New York State Threatened species) inhabit areas of contiguous deciduous forest containing high and low canopy, thick understory vegetation, large woody debris, and rock outcrops or talus slopes, often near sources of water (Gibbs et al. 2007, Ulev 2008). Individuals may also occur in edge habitats, including edges along dirt and old paved roads, railroad embankments, edges of waterbodies, fields and fence rows. The preferred habitat varies with season (e.g., winter denning habitat), gender, and reproductive status (Ulev 2008).

  Timber rattlesnakes hibernate below the frost line during the winter. Denning habitats are typically located in south-facing rocky areas within closed-canopy forest that is located near open canopy forest and exposed basking areas. Adult timber rattlesnakes hibernate communally and may share the den with other snake species and may return to the same

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43 Menzel, M.A., S.F. Owen, W.M. Ford, J.W. Edwards, P.B. Wood, B.R. Chapman, and K.V. Miller. 2002. Roost tree selection by northern long-eared bat (*Myotis septentrionalis*) maternity colonies in an industrial forest of the central Appalachian mountains. Forest Ecology and Management 155:107-114.

44 Johnson, J.B., J.W. Edwards, W.M. Ford, and J.E. Gates. 2009. Roost tree selection by northern myotis (*Myotis septentrionalis*) maternity colonies following prescribed fire in a Central Appalachian Mountains hardwood forest. Forest Ecology and Management 258:233-242.

45 New York Natural Heritage Program. 2013, letter dated December 31, 2013 (see **Appendix B**).

46 Reeder, D.M. and M.S. Moore. 2013. White-nose syndrome: a deadly emerging infectious disease of hibernating bats. pp. 413-435 in: Bat Evolution, Ecology, and Conservation (R.A. Adams and S.C. Pedersen, eds.). Springer, New York.

den site each year. Individuals enter the dens in the fall (in October in the northern latitudes and high elevations) and leave in the spring (late April or early May) (Ulev 2008). Timber rattlesnake dens have been recorded several miles north of the Project area in Letchworth State Park, and a single individual was reported approximately one mile north of the Project area (Roblee 2012).

Upon emergence in the spring, individuals spend a short time basking on rocks and then migrate long distances from the dens to the summer ranges where they forage, mate and bask. Distances migrated from dens generally range from 0.5 to 1 mile but can be up to 5 miles for males seeking mates. Once at the summer range, individuals move short distances to forage and breed. Males have the largest home range; females with fertilized eggs have the smallest. Home ranges of about 21 to 233 acres have been reported within hardwood forests. Males and females without fertilized eggs appear to prefer greater canopy closure, thicker surface vegetation, and fewer rocks in the spring and summer than females with fertilized eggs. Timber rattlesnakes prey primarily on small mammals (e.g., mice and voles, eastern grey squirrel, and chipmunk) and birds, hiding near logs to ambush prey. During the spring and fall, timber rattlesnakes are active during the day. During the summer they are more active at twilight or are nocturnal (Ulev 2008).

Females carrying fertilized eggs[47] collect at birthing rookeries near the den. Preferred rookery habitat has grassy ledges and well-drained, sparsely wooded knolls with low canopy cover, small amounts of surface vegetation, and rocks. The rocks are used for basking during morning and late afternoon and for hiding at other times. Females usually give birth to live young during the warmest time of the year. Average litter sizes range from 6 to 8. Timber rattlesnakes have low reproductive rates due to long reproductive intervals (2 to 4 years) and late sexual maturity (between 4 and 11 years of age).

Within the Project area, the hemlock–northern hardwood forest ecological community on the west side of the river and the successional northern hardwood forest on the east side of the river, the railroad habitat community, and the shale cliff and talus community have the potential to provide suitable summer habitat (e.g., foraging and breeding), or to be used as habitat for individuals in transit between the winter denning habitat and the summer range. However, Park Road may limit suitability of the woodland habitat and access to the gorge for basking habitat. Timber rattlesnake occurrence has been found to be negatively associated with roads (Steen et al. 2007), with even small roads appearing to pose significant barriers to timber rattlesnake movement (Clarke et al. 2010).

The Project area does not appear to contain suitable denning habitat, and no dens have been noted within proximity to the bridge. Neither side of the gorge offers a south-facing slope. In addition, the gorge on the west side of the river is separated from the forested areas by Park Road. The east side of the gorge within the Project area, along the Genesee Valley Greenway Trail, has rock outcrops and shale that are also representative of typical timber rattlesnake denning sites and not closely bounded by a paved road, but remain shaded for much of the day. As such, timber rattlesnakes are not likely to have dens in this area. Overall, timber rattlesnakes are considered to have the potential to occur in the Project area outside of the winter hibernation period when portions of the Project area may fall within the home ranges of individuals associated with dens elsewhere in Letchworth State Park.

[47] Timber rattlesnakes are ovoviviparous—After mating females store sperm for several months. Eggs are fertilized between 4 and 6 weeks after emergence from the dens in the spring (Ulev 2008). The fertilized eggs develop in the female and young are born live.

- Spiny Softshell Turtle

  The spiny softshell turtle is a New York State species of special concern with a narrow geographic range in New York that includes the Genesee River (Gibbs et al. 2007). However, spiny softshell turtles inhabit river sections with muddy bottoms in which they can bury themselves, and do not occur in waters with rocky substrates (Gibbs et al. 2007). The section of the Genesee River in the vicinity of Portageville Bridge has swift current and a substantial waterfall that do not allow sediment to accumulate and create a soft, muddy bottom. The river bottom in this area is rocky, and therefore, does not represent suitable habitat for spiny softshell turtles.

- Wood Turtle

  Wood turtles inhabit a variety of riverside or streamside woodland habitats, including those fragmented by agricultural land. Individuals have large home ranges and typically inhabit riverside or streamside environments bordered by woodlands or meadows. Activity areas comprise open sites close to water with low canopy cover. Individuals bask along stream banks and hibernate in creeks.[48] Wood turtles are considered relatively tolerant of moderate habitat alterations and human disturbance, but habitat destruction and fragmentation are acute threats to their populations (NatureServe 2010). Stream B and its surrounding forest may represent suitable habitat for wood turtles, and this species is considered to have the potential to occur in this area.

- Jefferson and Blue-Spotted Salamanders

  The Jefferson salamander primarily inhabits upland deciduous and mixed deciduous-coniferous forests; however, individuals have been found in bottomland forests adjacent to disturbed and agricultural areas. Breeding occurs in early spring in ephemeral pools and semi-permanent wetlands with emergent vegetation. Jefferson salamanders are generally subterranean, burying in small mammal burrows, under leaf litter, and decaying logs. Blue-spotted salamanders inhabit damp deciduous and deciduous-coniferous forests with temporary ponds. Breeding occurs in early spring in small fish-free ponds or wetlands at the edges of lakes. Similar to the Jefferson salamander, the blue-spotted salamander also spends much of its time beneath the ground but can also be found beneath rocks or logs.[49] No suitable breeding pools for blue-spotted or Jefferson salamanders were observed within or in the vicinity of the Project area, which limits the potential for these species to occur. According to the OPRHP, Jefferson and blue-spotted salamanders had been observed at Wetland A prior to draining activities to stabilize the adjacent slope but have not been observed since then.

Insects

One New York State species of special concern, the gray petaltail dragonfly (*Tachopteryx thoreyi*), is known to occur in seep areas outside of the current railroad right-of-way within Wyoming County. This species also occurs throughout Letchworth State Park.[50] This species has the potential to occur within Wetland A, but has not been documented by NYNHP as occurring within the Project area and was not observed during field investigations.

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[48] Gibbs, J.P., A.R. Breisch, P.K. Ducey, G. Johnson, J.L. Behler and R.C. Bothner. 2007. The Amphibians and Reptiles of New York State. Identification, Natural History, and Conservation. Oxford University Press, New York.

[49] Gibbs, J.P., et al.

[50] Field screening, August 20, 2008 and July 21, 2009.

The cobblestone tiger beetle (*Cicindela marginipennis*), a New York State rare species, has been identified along the Genesee River in the vicinity of Letchworth State Park.[51] Cobblestone tiger beetles live in isolated communities on sparsely vegetated gravel bars associated with bends in rivers or large creeks.[52] Suitable habitat for the cobblestone tiger beetle was not observed within the Project area and this species was not included in the NYNHP records for the Project area.

4.4.9-3-4 Invasive Species

As noted in **Appendix B**, invasive plant species, such as black locust and common ragweed, were identified during field visits. These species are common in and adjacent to the existing railroad right-of-way.

4.4.9-4 EFFECTS ASSESSMENT

The following sections assess the potential effects of operation of the Project on habitat resources and fish and wildlife, including endangered, threatened, Special Concern, and rare species and habitat communities. Chapter 4.5, "Construction Effects," assesses the potential for construction of the Project to affect these same resources.

4.4.9-4-1 No Action Alternative

The No Action Alternative would maintain the existing bridge and railroad right-of-way. Therefore, it would not alter the existing landscape or natural features of the Project site and its vicinity, nor would it affect ecological resources.

4.4.9-4-2 Preferred Alternative

Habitat

The habitats present within the Project area—the shale cliff and talus slope, hemlock–northern hardwood forest, successional northern hardwood forest, railroad, palustrine system, confined riverine community, and intermittent stream— are well represented as large areas within the 14,000-acre park (e.g., shale cliff and talus community [427 acres] and the hemlock–northern hardwoods forest [2,401 acres]) or within the region (e.g., successional forest). As discussed in Chapter 4.5, "Construction Effects," construction activities for the Preferred Alternative would require the clearing of approximately 3.0 acres, mostly consisting of forested habitat with pockets of maintained/mowed railroad right-of-way along the existing right-of-way; the placement of fill in a 0.03-acre portion of a 0.09-acre wetland (Wetland A); and the removal of approximately 1.1 acres of shale cliff and talus slope. These construction impacts would occur in edge communities at the edges of large tracts of the ecological communities described above and/or within an area that has been impacted by the development of a roadway, parking lot, trails, and the existing bridge.

Following construction, the portions of the Project area that were disturbed and that do not contain railroad infrastructure, park roadway, or parking area will be revegetated according to a habitat restoration plan to be developed in consultation with OPRHP in coordination with NYSDEC after issuance of the Record of Decision for the Project. This restoration plan is expected to consist of a palate of native trees, shrubs, and herbaceous materials that would complement the native species composition of the existing adjacent ecological communities. This restoration plan will also include provisions for invasive or native nuisance weeds species management. As discussed in Chapter 4.4.1. "Wetlands," any impacts to wetlands will be

[51] www.nature.org/wherewework/.../states/.../newsletter_fall04_1_3.pdf.

[52] www.nature.org/wherewework/.../states/.../newsletter_fall04_1_3.pdf.

mitigated as per the U.S. Army Corps of Engineers (USACE) permit conditions. Therefore, the operation of the Project would not be expected to result in adverse impacts to ecological communities within the Project area.

Fish and Wildlife

The operation of the Preferred Alternative would not be expected to result in adverse impacts to wildlife. The Project area contains an existing rail corridor with an operational bridge and rail line and the Project would continue these activities. The wildlife species inhabiting habitats adjacent to the area disturbed during construction of the Project are, in general, fairly mobile and could move to adjacent areas to forage, breed, and conduct other life activities should the change in proximity of the bridge or rail line result in habitats being less suitable for some individuals. Habitat for these species is abundant in Letchworth State Park and relatively contiguous with the Project area. Additionally, the Project area has not been identified by the USFWS or NYNHP as critical habitat for any wildlife species. No adverse impacts to the Letchworth BCA would occur due to the Preferred Alternative. For these reasons, the operation of the Preferred Alternative would not likely result in adverse impacts to wildlife species.

As discussed in Chapter 4.4.8, "Stormwater Management," to the extent practicable, vegetated swales would be used to direct stormwater and allow it to infiltrate the ground. Where necessary, new catch basins would be created along the new parking lot and new roadway to collect stormwater, which would be directed via pipes beneath Park Road, as in the existing condition. If needed and appropriate, additional surface water drainage facilities, to be developed during the Project's final design, would be installed to accommodate the change from an open to a solid bridge deck. Therefore, the operation of the Preferred Alternative would not result in adverse impacts to water quality or aquatic biota of Stream B or the Genesee River.

Endangered, Threatened, Special Concern, and Rare Species and Habitat Communities

Habitats

As described in Chapter 4.5, "Construction Effects," construction of the new railroad right-of-way would remove 1.7 acres of hemlock–northern hardwood forest and potentially affect 1.1 acres of shale cliff and talus community, both of which are New York State significant habitats. Although construction activities would adversely impact these habitat areas, activities would be limited to a small area of their occurrence, including habitat areas documented as previously disturbed. As stated above, these habitats are edge communities within the Project area. The removal of small portions of these edge communities would not fragment or impact the future integrity of the larger intact portions of these communities throughout the park. Furthermore, the operation of the Preferred Alternative would not result in the additional removal or degradation of these two communities within the park.

Following construction, the shale cliff and talus community near the new bridge would be allowed to return to its natural state, which, as noted above, is characterized by a combination of nearly vertical exposures of shale, siltstone, and sandstone bedrock with small areas of unstable talus and minimal vegetation. In the excavated areas closest to the bridge supports in the gorge wall, metal drape netting (a metal mesh curtain) would be used on the exposed rock to prevent erosion close to the bridge. The use of metal drape netting is proposed rather than shotcrete, a concrete mixture sprayed over the rock that was previously used to stabilize the area near the existing bridge, because the drape netting will not prevent establishment of vascular and non-vascular plants on the rock face, or use of the rock face by wildlife. A total of 13,800 square feet of existing cliff face surface would be blasted and removed to create the two excavated areas in which the bridge supports would be anchored. Within the two areas, a total of 19,000 square feet of newly exposed bedrock would be stabilized with drape netting.

As discussed above and in Chapter 4.5, "Construction Effects," following construction, the portions of the Project area disturbed during construction that would not contain permanent structures (e.g., railroad infrastructure, park roadway, or parking area) would be revegetated according to a habitat restoration plan to be developed with OPRHP in coordination with NYSDEC after issuance of the Record of Decision for the Project. Operation of the Project would not adversely affect the habitats created within the restored areas. Re-vegetation of these areas would be in accordance with the restoration plan. The restoration plan planting palate for the portions of the hemlock–northern hardwood forest would be expected to include native trees, shrubs, and herbaceous materials that would complement the native species composition of the existing hemlock–northern hardwood forest. Therefore, operation of the Preferred Alternative would not result in adverse impacts on significant habitats within the Project area or within the park.

Plants

The operation of the Project under the Preferred Alternative would not be expected to result in adverse impacts to any coast creeping moss that may be present within the Project area following construction activities. With the modifications to the park's stormwater drainage system near the new bridge, the Preferred Alternative would not result in a change in drainage patterns from the existing condition, or result in additional point source discharges or additional sources of potential pollutants that would adversely affect potential habitat areas for this species outside the area occupied by the bridge foundations in the rock. Impacts to the coastal creeping moss due to Project construction are discussed in Chapter 4.5, "Construction Effects."

Bald Eagle and Other Birds

As discussed in detail in Chapter 4.5, "Construction Impacts," construction activities associated with the Project have the potential to disturb the pair of bald eagles that nest near the Project site. The Project will implement measures to minimize disturbance to the eagles during construction, in accordance with the requirements of a permit that will be obtained from the USFWS in accordance with the federal Bald and Golden Eagle Protection Act (50 CFR Part 22). The operation of the Project under the Preferred Alternative would not be expected to result in adverse impacts to use of the Project area by bald eagles for foraging, roosting, and/or breeding. The Project area contains an existing rail corridor with an operational bridge and rail line and the Project would continue these activities. Similarly, the continued rail operation within the Project area would not be expected to adversely affect other state-listed bird species.

Bats

As discussed in detail in Chapter 4.5, "Construction Impacts," because it is possible that northern long-eared bats could roost within the Project area, all tree clearing for the Project will be limited to the period from October 31 to March 31 to follow USFWS-recommended guidelines and avoid potential removal of an active roost tree. Based on the conservation measures proposed, FHWA determined that the Project may affect, but is not likely to adversely affect, the proposed endangered northern long-eared bat. In a letter dated May 14, 2014, the USFWS concurred with this determination (see the Biological Evaluation and consultation correspondence in **Appendix B** of this DEIS). Once construction is completed, forested areas would be restored within the existing railroad right-of-way, and the operation of the Project under the Preferred Alternative would not result in adverse, long-term impacts on the eastern small-footed bat or northern long-eared bat.

Timber Rattlesnake

Once construction is completed, forested areas would be restored within the existing railroad right-of-way, and the operation of the Project under the Preferred Alternative would not result in adverse, long-term impacts on the timber rattlesnake.

Turtles

As discussed above under "Fish and Wildlife," the operation of the Project under the Preferred Alternative would not result in a change in drainage patterns from the existing condition, point source discharges, or additional sources of potential pollutants. Therefore, the operation of the Project would not be expected to result in adverse impacts to wood turtle habitat within the Project area. Suitable habitat for spiny softshell turtles is not present within the Project area. Therefore, operation of the Project would not adversely affect this species.

Salamanders

Suitable habitat for blue-spotted and Jefferson salamanders is not present within the Project site, and therefore no impacts to these species would be likely to occur. Wetland A, which appears to seldom contain standing water, does not represent a viable breeding pool for these species of salamanders.

Insects

Cobblestone tiger beetles, a New York State rare species, occur on small islands, river bends, and cobble bars within the Genesee River. Since potential habitat for this species is not present within the Project area, operation of the Project under the Preferred Alternative would not have the potential to adversely affect this species. Since the operation of the Project would not result in a change in drainage patterns from the existing condition, new point source discharges, or additional sources of potential pollutants, it would not have the potential to adversely affect use of habitats within the Project area by the gray petaltail dragonfly.

Invasive Species

As described above, a planting plan would be implemented post construction. The palate of species for the plan would consist of locally grown native herbaceous materials, shrubs, and trees that would likely occur in adjacent ecological communities. The planting plan (including species, sizes, numbers, and locations), which would include a tree planting program, would occur during the final design stages and would be developed in consultation with OPRHP. Invasive species management (e.g., mechanical/chemical removal of invasive plants, proper disposal of invasive species) would be included in the planting plan in order to minimize the potential for invasive and nuisance plant species during the establishment period. Therefore, the Project would be consistent with Executive Order 13112.

4.4.9-5 SUMMARY OF MITIGATION

When construction of the Project is complete, the portions of the Project area that were disturbed and that do not contain railroad infrastructure, park roadway, or parking area would be revegetated according to a habitat restoration plan to be developed with OPRHP in coordination with NYSDEC after issuance of the Record of Decision for the Project.

Measures that may be used to mitigate potential impacts due to operation of the Project would include invasive species control. Prior to site disturbance, potential invasive species will be identified and methods to control and/or remove these species will be developed. Measures to minimize the spread of invasive species during construction of the Project will be employed, such as washing construction equipment prior to arrival on-site. Following construction, portions of the Project area would be replanted with native species. Invasive species management would be included as part of the plant establishment period.

4.4.9-6 REFERENCES

Audubon New York. 2012. Letchworth State Park site profile. Downloaded from http://iba.audubon.org/iba/profileReport.do?siteId=1761, May 15, 2012.

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2002. *Ecological Communities of New York State*. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. (Draft for review). New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

Fowle, M. and P. Kerlinger. 2001. The New York City Audubon Society Guide to Finding Birds in the New York Metropolitan Area. Cornell University Press, Ithaca, NY.

Gibbs, J.P., A.R. Breisch, P.K. Ducey, G. Johnson, J.L. Behler, and R.C. Bothner. 2007. The amphibians and reptiles of New York State. Oxford University Press, New York.

NatureServe. 2010. NatureServe Explorer: an online encyclopedia of life (web application). Version 7.1. NatureServe. Arlington, Viginia. Available http://www.natureserve.org\explorer.

New York State Department of Environmental Conservation Breeding Bird Atlas (2000–2005) and Herp Atlas Project (1990–1998) databases; New York State Department of Environmental Conservation, New York Natural Heritage Program (NYNHP), letters dated August 27, 2008 from Tara Seoane, January 26, 2010 from Tara Salerno, and March 20, 2012 from Jean Pietrusiak (see **Appendix B**).

New York State Department of Environmental Conservation, New York Natural Heritage Program online ecological community information, http://www.acris.nynhp.org.

New York State Department of Environmental Conservation (NYSDEC). 2011. Bald eagle fact sheet. Available from http://www.dec.ny.gov/animals/74052.html.

New York State Museum. New York State Geological Survey. “Letchworth Gorge: Overview.” Available: http://www.nysm.nysed.gov/nysgs/experience/sites/letchworth/index.html (viewed on September 27, 2012.

Poole, A. (Editor). 2005. The Birds of North America Online. Cornell Laboratory of Ornithology, Ithaca, NY. http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/BNA/.

Roblee, K. 2012. Electronic mail communication between Kenneth Roblee, NYSDEC, and Chad Seewagen, AKRF Inc., April 26, 2012.

Smith, K.G., J.H. Withgott, and P.G. Rodewald. 2000. Red-headed Woodpecker (*Melanerpes erythrocephalus*). In: The Birds of North America Online (A. Poole, Ed.). Cornell Lab of Ornithology, Ithaca, NY. Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/518doi:10.2173/bna.518

Thompson, C.M. and K. McGarigal. 2002. The influence of research scale on bald eagle habitat selection along the lower Hudson River, New York (USA). Landscape Ecology 17:569-586.

Thompson, C.M., P.E. Nye, G.A. Schmidt and D.K. Garcelon. 2005. Foraging ecology of bald eagles in a freshwater tidal system. Journal of Wildlife Management 69:609-617.U.S. Department of Agriculture plants database, http://plants.usda.gov.

Ulev, e. 2008. *Crotalus horridus*. In: Fire Effects Information System, [Online]. US Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/[2012, October 5].

U.S. Fish and Wildlife Service on-line database of protected species: www.fws.gov: http://www.fws.gov/northeast/nyfo/es/CoListCurrent.pdf.

United States Fish and Wildlife Service (USFWS). 2007. National bald eagle management guidelines. Available from http://www.fws.gov/pacific/eagle/NationalBaldEagleManagement Guidelines.pdf.

Wells, J.V. 1998. Important Bird Areas in New York State. National Audubon Society, New York.

Additional information on Letchworth State Park from the following online resources:

www.nature.org/wherewework/.../states/.../newsletter_fall04_1_3.pdf

http://nysparks.state.ny.us/publications/documents/biodiverisity/BiodiversityBody Section2.pdf

http://nysparks.state.ny.us/parks/attachments/Letchworth2010TurkeyHuntingApplication.pdf

http://www.dec.ny.gov/animals/9368.html.

http://www.dec.ny.gov/animals/32006.html

http://www.dec.ny.gov/animals/62029.html